

STD Surveillance Network Report

STD Surveillance Network Overview

Traditionally, sexually transmitted disease (STD) surveillance activities involve collecting basic information on the age, sex, race/ethnicity, and county of residence of cases. However, in order to improve the design of public health programs for the prevention and control of STDs such as gonorrhea, more detailed information is needed on a broad cross-section of patients.

In response to such surveillance needs, the Centers for Disease Control and Prevention (CDC) established the STD Surveillance Network (SSuN). SSuN is intended to be a dynamic, flexible STD surveillance network composed of local enhanced STD surveillance systems following common protocols. The purpose of SSuN is to fill critical gaps in national surveillance as well as improve the capacity of national, state, and local STD programs to detect, monitor, and respond rapidly to trends in STDs through enhanced collection, reporting, analysis, visualization, and interpretation of disease information.

In the first funding cycle of SSuN (10/2005-9/2008), 5 geographically diverse health departments participated in enhanced gonorrhea surveillance in order to better characterize the epidemiology of gonorrhea. In the sec-

ond cycle of SSuN (10/2008-9/2013), the scope of the project was expanded to include all STDs, and 12 sites across the United States now participate in these enhanced surveillance activities. The SSuN project areas currently encompass 42 STD clinics, 115 counties, and 6 laboratories. Data collected as part of SSuN now capture approximately 20% of the total gonorrhea cases diagnosed annually in the United States.

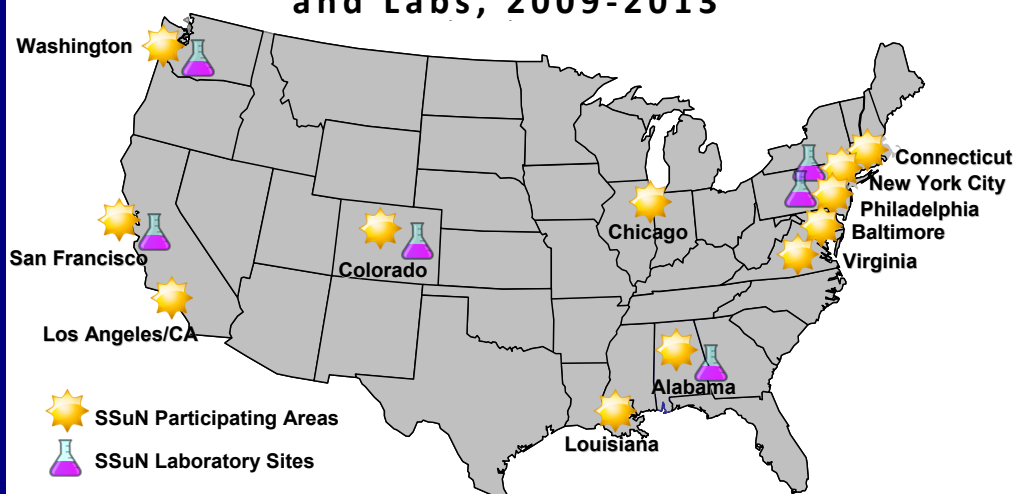
SSuN has two main components: STD clinic surveillance and *Neisseria gonorrhoeae* (NG) population surveillance. The former involves collecting enhanced information on patients presenting to STD clinics, while the latter involves interviewing a random sample of patients diagnosed with gonorrhea in the general population. The data captured as part of SSuN include information not only on STD diagnoses, but also on patient demographics and high-risk behaviors.

In Virginia, three localities participate in the SSuN project: Richmond City, Chesterfield County, and Henrico County. Enhanced surveillance data is captured for approximately 6,000 STD clinic visits and over 1,000 cases of gonorrhea each year in these three localities.

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SSuN Cycle II Participating Project Areas and Labs, 2009-2013



STDs in the Richmond Area

Chlamydia trachomatis infection is the most commonly reported notifiable disease in the United States. The national chlamydia rate in 2009 was 409.2 cases per 100,000. The chlamydia rate in Virginia was 397.8 per 100,000.

Gonorrhea (*Neisseria gonorrhoeae* infection) is the second most commonly reported notifiable disease in the United States. In Virginia, the 2009 gonorrhea rate was 100.3 per 100,000 population, compared to a national gonorrhea rate of 99.1 per 100,000.

Rates of chlamydia cases have been increasing over the past decade, while gonorrhea rates have remained mostly stable with only a slight downward trend (Figure 1).

There are approximately 4,500-5,000 cases of chlamydia and 1,500-2,000 cases of gonorrhea diagnosed in the Richmond area each year (including the localities of Richmond City, Henrico County, and Chesterfield County).

Richmond City has historically experienced one of the highest gonorrhea rates of any city in the United States. There are also large disparities in STD rates between Richmond City

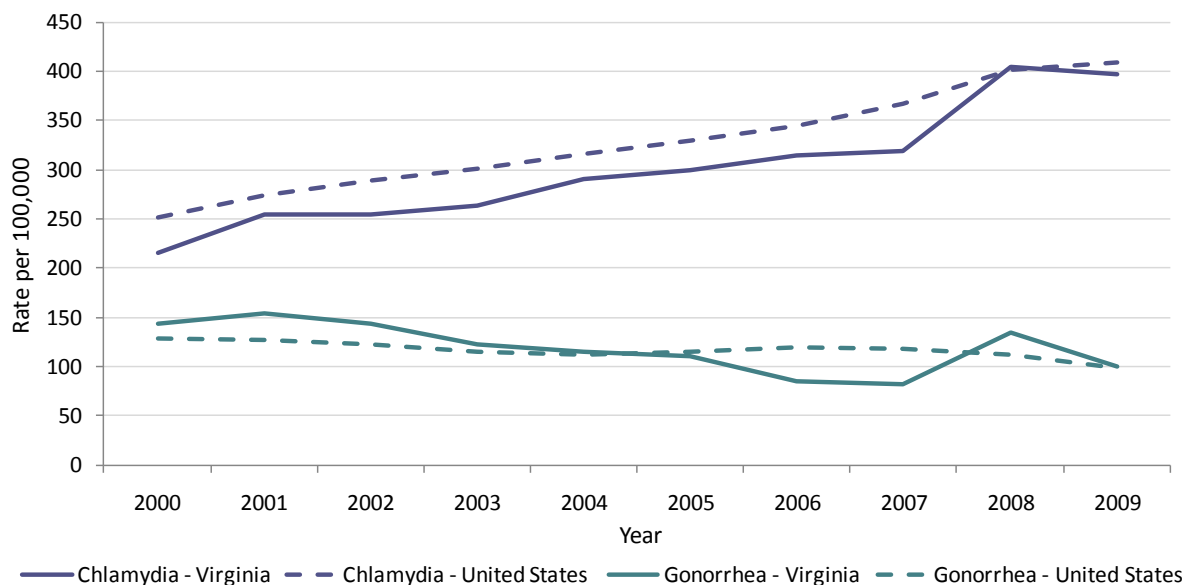
and the surrounding localities. In 2008 the gonorrhea rate for Richmond City was 639 per 100,000, significantly higher than the 162 and 117 per 100,000 observed in Henrico and Chesterfield counties, respectively. That is, Richmond City's gonorrhea rate in 2008 was 4 times that of neighboring Henrico County and 5.5 times that of Chesterfield county.

Distinct patterns can be observed in the spatial or geographic distribution of both chlamydia and gonorrhea rates in the Richmond area. High rates of these infections are consistently clustered in the eastern and central areas of the city and radiate outwards (Maps 1 & 2). These high rates tend to be concentrated in areas with high levels of poverty and economic disadvantage, which are often disproportionately inhabited by minority populations.

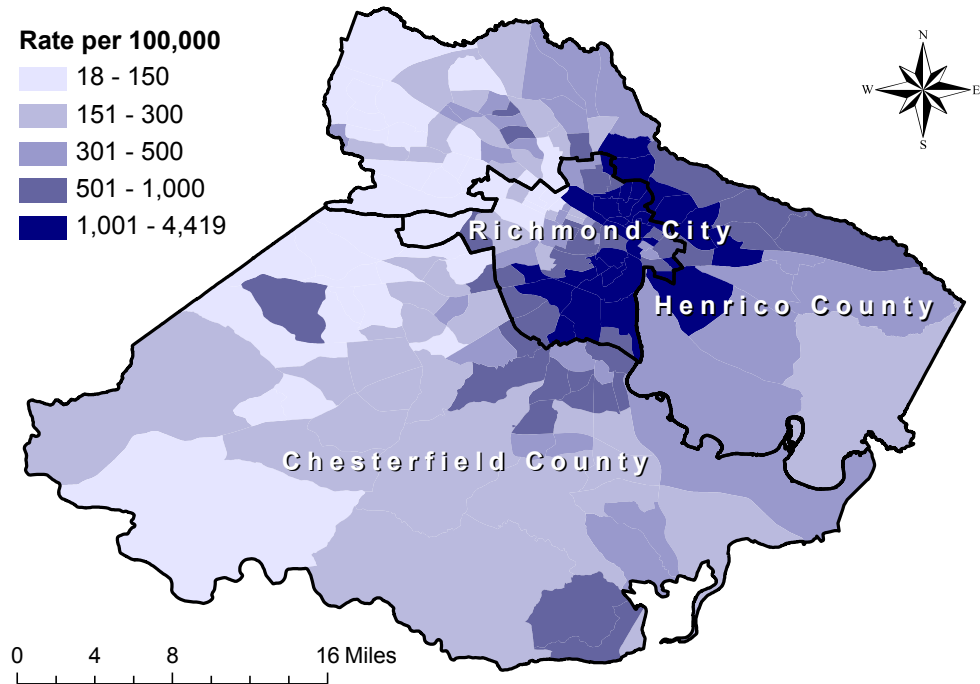
For more information on national STD data, see the CDC's report, *Sexually Transmitted Disease Surveillance, 2009*:

<http://www.cdc.gov/std/stats09/>

Figure 1. Annual Chlamydia and Gonorrhea Rates, 2000-2009

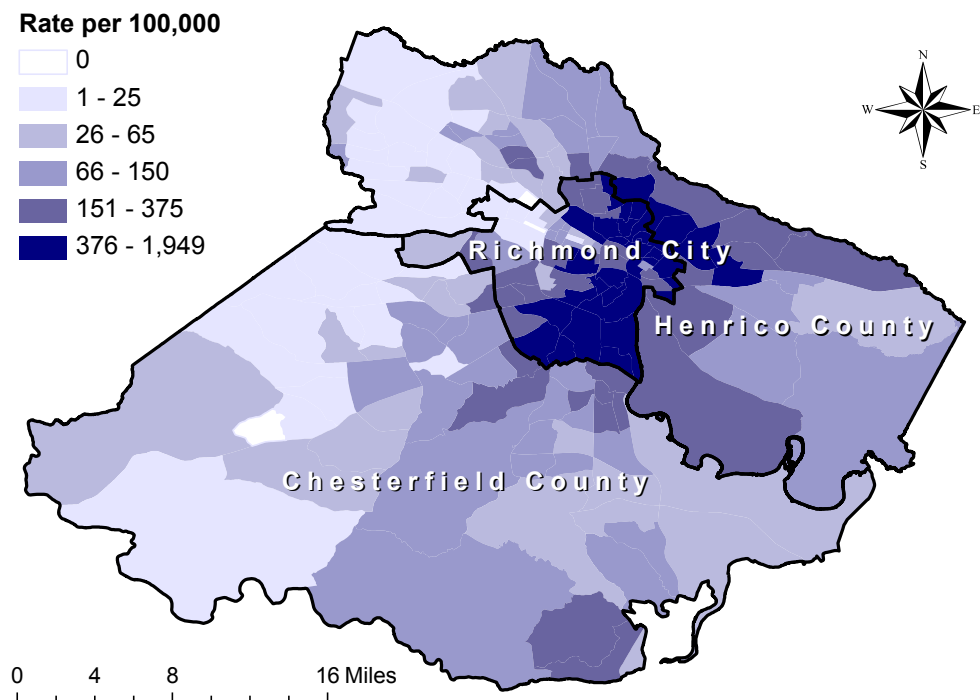


Map 1. 5-Year Average Chlamydia Rates by Census Tract, 2006-2010



Source: Annual population estimates for each census tract were obtained from GeoLytics, Inc.

Map 2. 5-Year Average Gonorrhea Rates by Census Tract, 2006-2010



Source: Annual population estimates for each census tract were obtained from GeoLytics, Inc.

Managing SSuN Activities in Virginia

SSuN project activities in Virginia are coordinated by Health Informatics and Integrated Surveillance Systems (HISS) staff within the Division of Disease Prevention (DDP) at the Virginia Department of Health's Central Office.

SSuN activities involve collaboration with the STD clinics in the 3 participating Virginia health districts. Clinical staff at these local STD clinics distribute self-administered interview forms during the registration process to all patients visiting the clinic. These completed interview forms are then sent to the central office for data entry into the SSuN data system. Data quality assurance and management activities

also occur at the central office, including the integration of patient interview data with information on STD diagnoses and treatment from other STD and HIV/AIDS surveillance data systems.

The SSuN grant funds a full-time STD epidemiologist to coordinate SSuN activities in Virginia. In addition, masters of public health (MPH) students are often hired to assist with additional data collection activities such as conducting phone interviews with patients diagnosed with gonorrhea. These students also assist with data analyses and reports.

SSuN Featured in *Public Health Reports*

Several articles authored by DDP staff were published in a special supplement to the November/December 2009 issue of *Public Health Reports* (Vol. 124, Supplement 2). This issue was dedicated to the surveillance of STDs. Various activities and analyses related to the SSuN enhanced surveillance project and its precursor, the OASIS (Outcome Assessment through Systems of Integrated Surveillance) project were highlighted throughout this supplement.

Some of these articles include:

- **Assessment of Geographic Information Systems and Data Confidentiality Guidelines in STD Programs**
Jennifer M. Bissette / Jeffrey A. Stover / Philip Christopher Delcher / Carrie B. Dolan / LaShonda Johnson
- **Improving Surveillance of Sexually Transmitted Diseases through Geocoded Morbidity Assignment**
Jeffrey A. Stover / Khalid A. Kheirallah / Philip Christopher Delcher / Carrie B. Dolan / LaShonda Johnson
- **Here Comes the SSuN: Early Experiences with the STD Surveillance Network**
CA Rietmeijer / J Donnelly / KT Bernstein / JM Bissette / et al.



Color lithograph reproduction of poster entitled "The race to death," created for the French National League against Venereal Diseases. Image from the National Library of Medicine.

- **Providing Mailing Cost Reimbursements: The Effect on Reporting Timelines of Sexually Transmitted Diseases in Virginia**
Oana E. Vasiliu / Jeffrey A. Stover / Marissa J. E. Mays / Jennifer M. Bissette / Carrie B. Dolan / Corina M. Sirbu

The full supplemental issue of *Public Health Reports* can be accessed at:

<http://www.publichealthreports.org/archives/issuecontents.cfm?Volume=124&Issue=8>

STD Clinic Surveillance

Interviews were captured for 12,874 patient visits to the three participating STD clinics during the two year period between January 1, 2009 and December 31, 2010 (out of 17,707 total clinic visits). During this time period, all patients presenting to participating STD clinics were asked to complete a SSuN interview form during the registration process. This interview form captures information on patient demographics, risk behaviors, and STD history. Data from these interviews are later merged with patient diagnoses and treatment information from other STD reporting systems.

Quick Overview

- **12,874 interviews conducted**
 - **9,402 interviews from Richmond City**
 - **1,687 interviews from Henrico County**
 - **1,785 interviews from Chesterfield Co.**

The majority of patients presenting to the SSuN-participating STD clinics were black, non-Hispanic, and between 20-34 years of age (Table 1). Almost 9% of the clinic population reported either homosexual or bisexual orientation. Fifteen percent had less than a high school education and 35% were unemployed.

However, there were significant differences in demographic characteristics between clinics (Figure 2). For example, 86% of Richmond City patients were black compared to 78% of Henrico County patients. The Chesterfield County clinic had the lowest percentage of black patients (55%) and the highest proportion of Hispanic patients (21%). Richmond City patients were more likely to be male than either Henrico or Chesterfield patients (51% compared to 41%). Richmond City and Henrico County patients also reported slightly higher frequencies of homosexual and bisexual orientation.

Engagement in various high-risk behaviors was similar between the clinics (Table 2).

Chlamydia was the most frequently diagnosed STD in the clinics, with a positivity rate of 14% (1,791 cases). The gonorrhea positivity rate was 4.7% (603 cases). There were slight variations in positivity rates between clinics (Table 3). For example, the Chlamydia rate was highest in Chesterfield County while the gonorrhea rate was highest in Richmond City.

The majority of patients attended STD clinics within their own localities of residence, however there was considerable crossover between neighboring areas (Table 4). Approximately 20% of Richmond City and Henrico patients were residents of the opposite locality.

Patient characteristics and behaviors varied by gender and sexuality (Tables 5 & 6). For example, males were more likely than females to report homosexual orientation (6% vs. 2%), while females were more likely to report bisexual orientation (6% vs. 3%). Males were more likely to report marijuana use (32% vs. 19%), engage in anonymous sex (7% vs. 4%), and have 3 or more sex partners in the previous 3 months (21% vs. 10%).

Homosexual patients reported the highest rate of engaging in anonymous sex (10.7%) and meeting sex partners on the internet (26%). Bisexual patients were most likely to report marijuana use (37%), incarceration within the past year (8%), and exchanging money or drugs for sex (3%); 29% reported having more than 3 sex partners (Figure 3).

STD diagnosis rates were highest among patients who were male, black, and in younger age groups (Table 7, Figures 4-5). That is, 6% of male clinic patients were diagnosed with gonorrhea compared to 3% of females. Fifteen percent of black patients were diagnosed with Chlamydia compared to 9% of white patients. STD positivity rates also increased with increased engagement in high-risk sex behaviors, such as having multiple sex partners (Figure 6).

2010 STD Surveillance Network Report

Table 1. Characteristics of Patients Attending Richmond Area STD Clinics, 2009-10

Characteristic	Overall		Richmond		Henrico		Chesterfield	
	N	%	N	%	N	%	N	%
Gender								
Male	6,245	48.5	4,813	51.2	693	41.1	739	41.4
Female	6,612	51.4	4,575	48.7	992	58.8	1,045	58.5
Transgender	17	0.1	14	0.1	2	0.1	1	0.1
Race								
Black	10,336	80.3	8,045	85.6	1,310	77.7	981	55.0
White	2,015	15.7	1,028	10.9	320	19.0	667	37.4
Other	410	3.2	240	2.6	52	3.1	118	6.6
Unknown	113	0.9	89	0.9	5	0.3	19	1.1
Ethnicity								
Hispanic	999	7.8	495	5.3	132	7.8	372	20.8
Non-Hispanic	11,754	91.3	8,801	93.6	1,546	91.6	1,407	78.8
Unknown	121	0.9	106	1.1	9	0.5	6	0.3
Age								
15-19 years	516	4.0	337	3.6	90	5.3	89	5.0
20-24 years	4,421	34.3	3,219	34.2	574	34.0	628	35.2
25-34 years	4,963	38.6	3,548	37.7	662	39.2	753	42.2
35-44 years	1,697	13.2	1,243	13.2	239	14.2	215	12.0
45+ years	1,277	9.9	1,055	11.2	122	7.2	100	5.6
Sexuality								
Heterosexual	10,720	83.3	7,754	82.5	1,528	90.6	1,438	80.6
Homosexual	521	4.0	433	4.6	62	3.7	26	1.5
Bisexual	599	4.7	478	5.1	73	4.3	48	2.7
Unknown	1,034	8.0	737	7.8	24	1.4	273	15.3
Education								
Less than HS/GED	1,890	14.7	1,362	14.5	247	14.6	281	15.7
High school/GED	5,048	39.2	3,702	39.4	692	41.0	654	36.6
Some college	4,230	32.9	3,056	32.5	560	33.2	614	34.4
4+ years college	1,219	9.5	902	9.6	169	10.0	148	8.3
Unknown	487	3.8	380	4.0	19	1.1	88	4.9
Employment								
Employed	6,525	50.7	4,626	49.2	986	58.4	913	51.1
Unemployed	4,485	34.8	3,348	35.6	548	32.5	589	33.0
Other*	991	7.7	734	7.8	97	5.7	160	9.0
Unknown	873	6.8	694	7.4	56	3.3	123	6.9
Student Status								
Full-time student	2,292	17.8	1,662	17.7	294	17.4	336	18.8
Part-time student	1,142	8.9	827	8.8	163	9.7	152	8.5
Not a student	8,843	68.7	6,468	68.8	1,172	69.5	1,203	67.4
Unknown	597	4.6	445	4.7	58	3.4	94	5.3
Totals	12,874		9,402		1,687		1,785	

* Includes retired, homemaker, and unable to work

Figure 2. Comparison STD Clinic Patient Race/Ethnicity by Clinic



Table 2. Risk Behaviors of Patients Attending Richmond Area STD Clinics, 2009-10

Risk Behavior	Overall		Richmond		Henrico		Chesterfield	
	N	%	N	%	N	%	N	%
Used condom last sex	4,301	33.4	3,105	33.0	638	37.8	558	31.3
Ever tested for HIV	9,827	76.3	7,323	77.9	1,321	78.3	1,183	66.3
Anonymous sex*	663	5.1	475	5.1	96	5.7	92	5.2
Met sex partner on internet*	494	3.8	376	4.0	61	3.6	57	3.2
Marijuana use*	3,250	25.2	2,413	25.7	448	26.6	389	21.8
Incarcerated*	802	6.2	599	6.4	103	6.1	100	5.6
Exchanged money or drugs for sex*	120	0.9	91	1.0	15	0.9	14	0.8
Number of sex partners†								
0 partners	669	5.2	469	5.0	92	5.5	108	6.1
1 partner	6,084	47.3	4,277	45.5	898	53.2	909	50.9
2 partners	3,194	24.8	2,367	25.2	422	25.0	405	22.7
3+ partners	1,947	15.1	1,505	16.0	245	14.5	197	11.0
Unknown	980	7.6	784	8.3	30	1.8	166	9.3
Totals	12,874		9,402		1,687		1,785	

* In the previous 12 months

† In the previous 3 months

Table 3. Patient Diagnoses by STD Clinic, 2009-2010

Diagnosis	Overall		Richmond		Henrico		Chesterfield	
	N	%	N	%	N	%	N	%
Chlamydia	1,791	13.9	1,275	13.6	236	14.0	280	15.7
Gonorrhea	603	4.7	482	5.1	68	4.0	53	3.0
Syphilis	69	0.5	51	0.5	13	0.8	5	0.3
HIV (rapid test)	48	0.4	42	0.4	3	0.2	3	0.2
Totals	12,874		9,402		1,687		1,785	

Summary of STD Clinic Statistics

- 73% of all STD clinic patients were between 20-34 years of age.
- Richmond City had the highest proportion of black patients (86%) compared to Henrico County (78%) and Chesterfield County (55%).
- Chesterfield has the highest proportion of Hispanic patients (21%) compared to Richmond City (5%) and Henrico County (8%).
- 59% of patients attending the Henrico and Chesterfield STD clinics were female, while only 49% Richmond City clinic patients were female.
- 10% of Richmond City and 8% of Henrico County patients indicated homosexual or bisexual orientation, compared to only 4% of Chesterfield County patients.
- Richmond City had the highest gonorrhea positivity rate (5.1%) while Chesterfield County had the highest chlamydia positivity rate (15.7%).

Table 4. Patient Locality of Residence by STD Clinic, 2009-2010

Locality of Residence	Overall		Richmond Clinic		Henrico Clinic		Chesterfield Clinic	
	N	%	N	%	N	%	N	%
Richmond City	5,921	46.0	5,286	56.2	365	21.6	270	15.1
Henrico County	3,187	24.8	2,047	21.8	1,090	64.6	50	2.8
Chesterfield County	2,145	16.7	896	9.5	65	3.9	1,184	66.3
Hanover County	198	1.5	142	1.5	53	3.1	3	0.2
Petersburg City	167	1.3	72	0.8	8	0.5	87	4.9
Colonial Heights	106	0.8	17	0.2	6	0.4	83	4.6
Other	436	3.4	302	3.2	59	3.5	75	4.2
Unknown	714	5.5	640	6.8	41	2.4	33	1.8
Totals	12,874		9,402		1,687		1,785	

Table 5. Patient Characteristics and Risk Behaviors by Gender, 2009-2010

Characteristic*	Overall		Male		Female	
	N	%	N	%	N	%
Race						
Black	10,324	80.3	4,966	79.5	5,358	81.0
White	2,010	15.6	1,042	16.7	968	14.6
Other	410	3.2	179	2.9	231	3.5
Sexuality						
Heterosexual	10,712	83.3	5,097	81.6	5,615	84.9
Homosexual	515	4.0	398	6.4	117	1.8
Bisexual	598	4.7	189	3.0	409	6.2
Employment						
Employed	6,518	50.7	3,279	52.5	3,239	49.0
Unemployed	4,477	34.8	2,226	35.6	2,251	34.0
Other†	990	7.7	346	5.5	644	9.7
Student Status						
Full-time student	2,290	17.8	829	13.3	1,461	22.1
Part-time student	1,139	8.9	460	7.4	679	10.3
Not a student	8,832	68.7	4,634	74.2	4,198	63.5
Used condom last sex	4,298	33.4	2,235	35.8	2,063	31.2
Ever tested for HIV	9,812	76.3	4,507	72.2	5,305	80.2
Anonymous sex‡	662	5.1	420	6.7	242	3.7
Met sex partner on internet‡	493	3.8	362	5.8	131	2.0
Marijuana use‡	3,247	25.3	1,996	32.0	1,251	18.9
Incarcerated‡	800	6.2	583	9.3	217	3.3
Exchanged money or drugs for sex‡	119	0.9	63	1.0	56	0.8
Number of sex partners**						
0 partners	668	5.2	346	5.5	322	4.9
1 partner	6,077	47.3	2,411	38.6	3,666	55.4
2 partners	3,191	24.8	1,594	25.5	1,597	24.2
3+ partners	1,942	15.1	1,298	20.8	644	9.7
Totals	12,857		6,245		6,612	

* Unknown categories not shown. Data exclude transgender individuals due to small numbers.

† Includes retired, homemaker, and unable to work

‡ In the previous 12 months

**In the previous 3 months

Table 6. Patient Characteristics and Risk Behaviors by Sexuality, 2009-2010

Characteristic*	Heterosexual		Homosexual		Bisexual	
	N	%	N	%	N	%
Race						
Black	8,798	82.1	375	72.0	470	78.5
White	1,558	14.5	126	24.2	104	17.4
Other	310	2.9	16	3.1	24	4.0
Employment						
Employed	5,514	51.4	308	59.1	265	44.2
Unemployed	3,765	35.1	155	29.8	247	41.2
Other†	782	7.3	32	6.1	57	9.5
Used condom last sex	3,600	33.6	250	48.0	250	41.7
Ever tested for HIV	8,237	76.8	458	87.9	499	83.3
Anonymous sex‡	545	5.1	56	10.7	51	8.5
Met sex partner on internet‡	282	2.6	137	26.3	68	11.4
Marijuana use‡	2,732	25.5	156	29.9	224	37.4
Incarcerated‡	707	6.6	33	6.3	49	8.2
Exchanged money or drugs for sex‡	92	0.9	7	1.3	16	2.7
Number of sex partners**						
0 partners	532	5.0	39	7.5	29	4.8
1 partner	5,508	51.4	214	41.1	201	33.6
2 partners	2,822	26.3	145	27.8	190	31.7
3+ partners	1,642	15.3	107	20.5	172	28.7
Totals	10,720		521		599	

* Data exclude interviews where information on patient sexuality is missing. Unknown categories not shown.

† Includes retired, homemaker, and unable to work

‡ In the previous 12 months

**In the previous 3 months

Figure 3. Comparison of Selected Risk Behaviors by Sexuality, 2009-2010

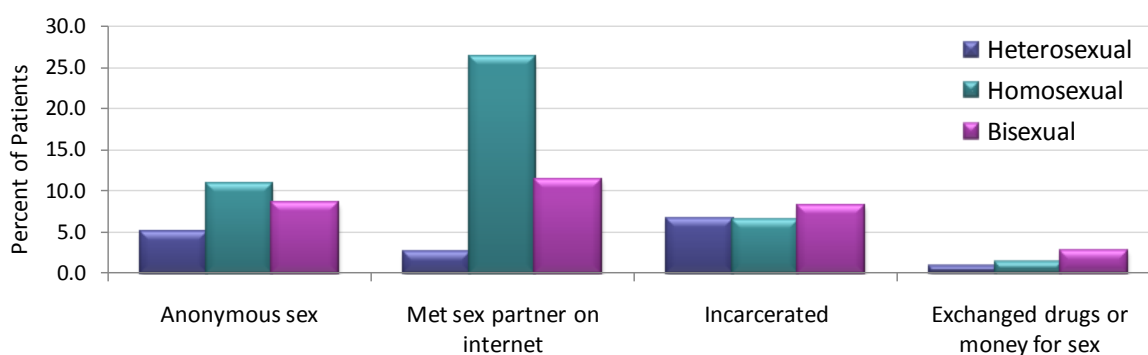


Table 7. STD Positivity Rates by Patient Characteristics & Risk Behaviors, 2009-10

Characteristic*	Total	Gonorrhea		Chlamydia		Syphilis	
	N	N	%	N	%	N	%
Gender							
Male	6,245	384	6.15	991	15.87	54	0.86
Female	6,612	219	3.31	799	12.08	13	0.20
Transgender	17	0	0.00	1	5.88	2	11.76
Race							
Black	10,336	575	5.56	1,556	15.05	59	0.57
White	2,015	20	0.99	183	9.08	7	0.35
Other	410	7	1.71	46	11.22	2	0.49
Age							
15-19 years	516	39	7.56	138	26.74	0	0.00
20-24 years	4,421	304	6.88	922	20.86	19	0.43
25-34 years	4,963	201	4.05	583	11.75	20	0.40
35-44 years	1,697	31	1.83	104	6.13	17	1.00
45+ years	1,277	28	2.19	44	3.45	13	1.02
Sexuality							
Heterosexual	10,720	505	4.71	1,595	14.88	29	0.27
Homosexual	521	17	3.26	11	2.11	24	4.61
Bisexual	599	35	5.84	66	11.02	9	1.50
Education							
Less than HS/GED	1,890	115	6.08	311	16.46	9	0.48
High school/GED	5,048	271	5.37	816	16.16	29	0.57
Some college	4,230	163	3.85	523	12.36	22	0.52
4+ years college	1,219	18	1.48	82	6.73	7	0.57
Anonymous Sex‡							
Yes	663	37	5.58	82	12.37	5	0.75
No	4,512	163	3.61	592	13.12	5	0.11
Marijuana use‡							
Yes	3,250	202	6.22	559	17.20	17	0.52
No	3,370	123	3.65	403	11.96	5	0.15
Incarcerated‡							
Yes	802	48	5.99	120	14.96	3	0.37
No	4,730	184	3.89	618	13.07	10	0.21
Number of sex partners**							
0 partners	669	17	2.54	36	5.38	18	2.69
1 partner	6,084	205	3.37	789	12.97	23	0.38
2 partners	3,194	189	5.92	476	14.90	15	0.47
3+ partners	1,947	148	7.60	360	18.49	9	0.46

* Unknown/missing categories not shown

† Includes retired, homemaker, and unable to work

‡ In the previous 12 months

**In the previous 3 months

Figure 4. STD Positive Diagnoses by Gender and Race

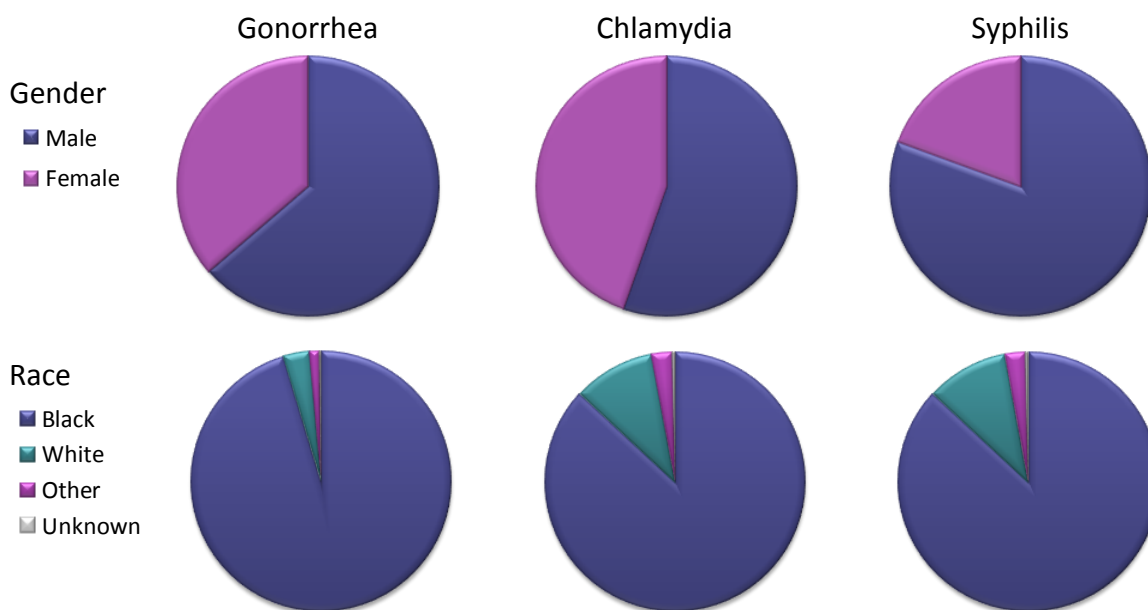


Figure 5. STD Positivity Rates by Patient Age

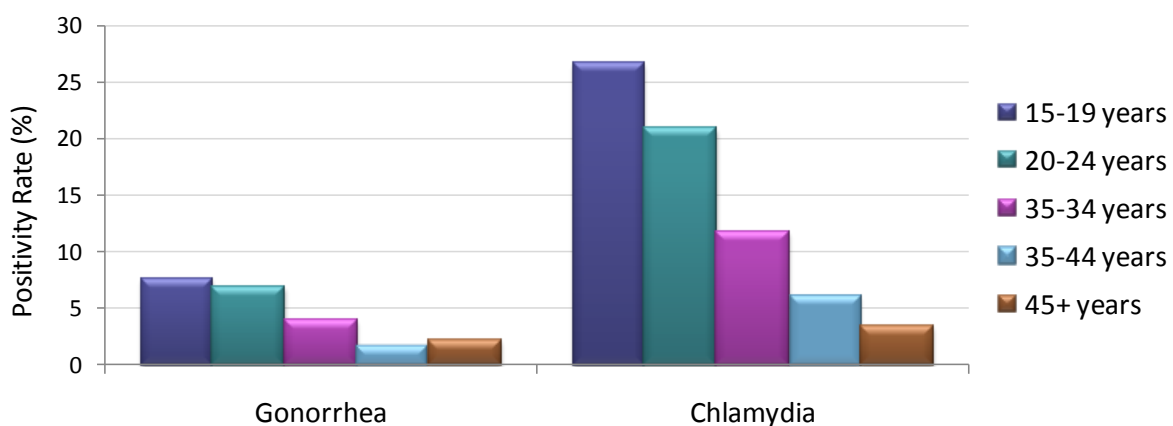
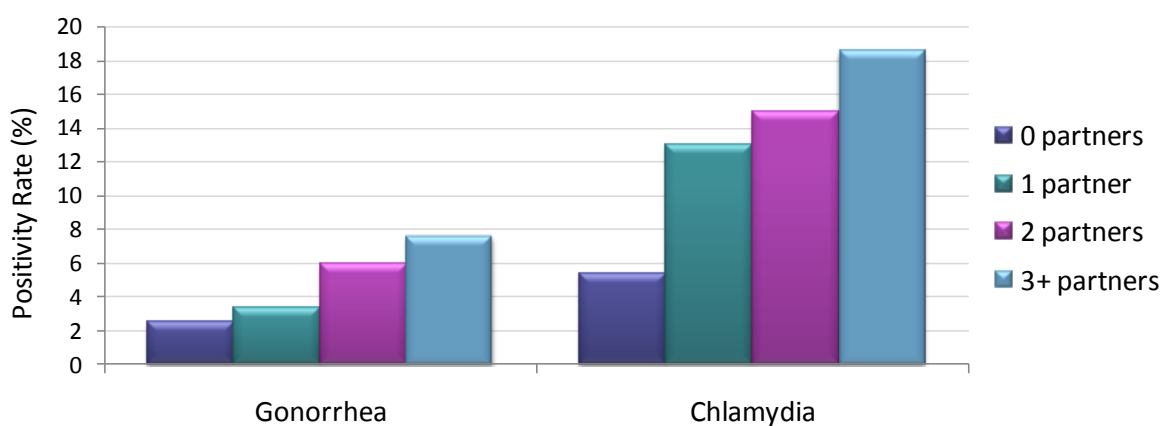


Figure 6. STD Positivity Rates by Number of Sex Partners in Previous 3 Months



NG Population Surveillance

In the Richmond metropolitan area (including the localities of Richmond City, Henrico and Chesterfield counties), there were 1,079 verified cases of gonorrhea diagnosed in 2010 and reported to the Virginia Department of Health.

Of these cases, the majority were black and between 15-34 years of age (Figure 7, Table 8). Approximately 43% of all diagnosed cases were male and 57% were female.

Most cases were diagnosed by emergency rooms or urgent care clinics (32%), followed by STD clinics (28%), and family planning or reproductive health facilities (23%).

There were some notable differences in diagnosing facility by gender (Figure 8). Men were most likely to be diagnosed with gonorrhea at emergency rooms or urgent care clinics (43%), while women were more likely to be diagnosed at reproductive health facilities (40%).

As part of SSuN *Neisseria gonorrhoeae* (NG) population surveillance activities, a random sample of individuals diagnosed with gonorrhea in the general population are contacted by phone and asked to participate in a brief interview. These interviews capture information on patient demographics and risk behaviors similar to that collected in the STD clinics.

Among the 180 gonorrhea cases interviewed in the Richmond area in 2010, most were black, heterosexual, and between 20-24 years of age (Table 9). Forty-nine percent were unemployed at the time of the interview.

A large proportion of interviewees reported engaging in high-risk behaviors, such as not using a condom at last sexual encounter (67%), having sex with someone they were not able to contact again (14%), using marijuana (24%), and having more than one sex partner in the previous 3 months (43%).

Similar to the STD clinic surveillance data, reported engagement in these behaviors varied significantly by gender. For example, men were more likely to be older, unemployed, engage in anonymous sex, and report having 3 or more sexual partners in the previous 3 months. Women were less likely to report condom use at last sexual intercourse (28% vs. 41%).

Almost 20% of interviewed men reported homosexual or bisexual orientation. Behaviors varied slightly by sexual orientation (not shown), although the small numbers of homosexual or bisexual individuals interviewed precluded meaningful analysis.

Quick Overview

- **1,079 cases of gonorrhea**
 - **85% black**
 - **57% female**
 - **32% diagnosed by ER/Urgent Care**
 - **68% between 15-24 years of age**
- **180 phone interviews conducted**
 - **9% homosexual or bisexual**
 - **33% used condom last sex**
 - **24% reported marijuana use**

Figure 7. Gonorrhea Cases by Race, 2010

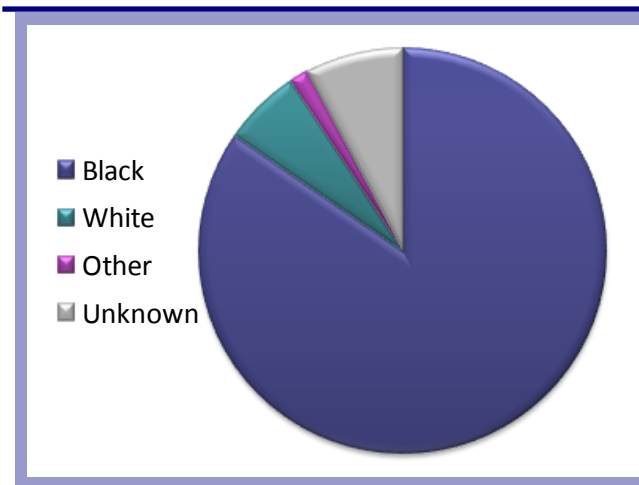


Table 8. Characteristics of Gonorrhea Cases, SSuN Population Surveillance, 2010

Characteristic	Total*		Male		Female	
	N	%	N	%	N	%
Race						
Black	913	84.6	387	83.4	525	85.5
White	66	6.1	34	7.3	32	5.2
Other	16	1.5	9	1.9	7	1.1
Unknown	84	7.8	34	7.3	50	8.1
Age						
10-14 years	2	0.2	0	0.0	2	0.3
15-19 years	329	30.5	95	20.5	234	38.1
20-24 years	406	37.6	174	37.5	231	37.6
25-34 years	233	21.6	118	25.4	115	18.7
35-44 years	78	7.2	54	11.6	24	3.9
45+ years	31	2.9	23	5.0	8	1.3
Provider Type						
ER/Urgent Care	349	32.3	198	42.7	151	24.6
STD Clinic	299	27.7	177	38.1	122	19.9
FP/GYN/RH†	252	23.4	8	1.7	244	39.7
Private Provider/HMO	96	8.9	48	10.3	48	7.8
Other‡	81	7.5	32	6.9	48	7.8
Unknown	2	0.2	1	0.2	1	0.2
Totals	1,079		464		614	

* Includes all verified cases of gonorrhea diagnosed in the localities of Richmond City, Henrico County, and Chesterfield County between January 1, 2010 and December 31, 2010

† Family planning / OB GYN / reproductive health facility

‡ Includes hospital, public clinic (non-STD), school, jail/prison, military, outreach, HIV care clinic, and other

Figure 8. Provider Type Diagnosing Gonorrhea Cases by Gender, 2010

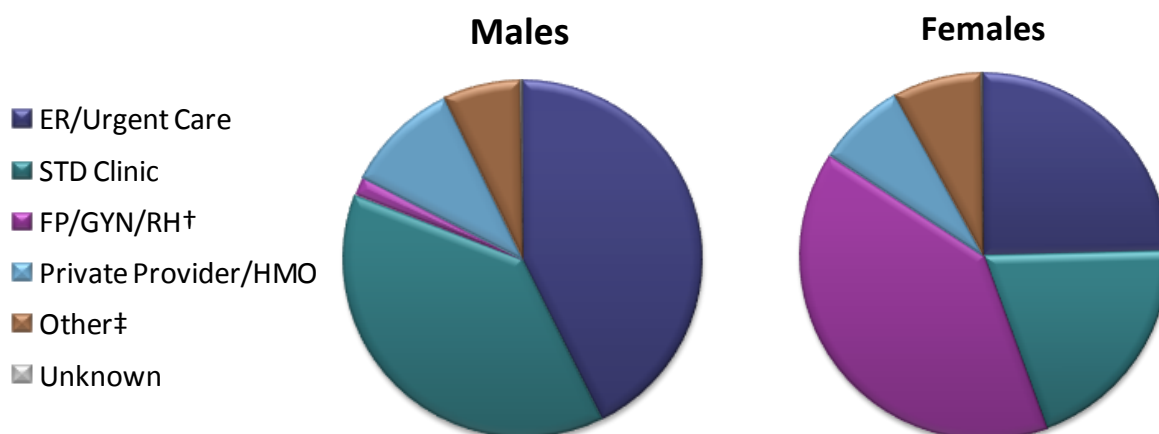


Table 9. Characteristics of Interviewed Gonorrhea Cases, 2010

Characteristic*	Total		Male		Female	
	N	%	N	%	N	%
Race						
Black	159	88.3	63	80.8	96	94.1
White	16	8.9	11	14.1	5	4.9
Other	4	2.2	3	3.8	1	1.0
Age						
15-19 years	51	28.3	13	16.7	38	37.3
20-24 years	73	40.6	29	37.2	44	43.1
25-34 years	34	18.9	16	20.5	18	17.6
35-44 years	14	7.8	14	17.9	0	0.0
45+ years	8	4.4	6	7.7	2	2.0
Sexuality						
Heterosexual	162	90.0	62	79.5	100	98.0
Homosexual	10	5.6	10	12.8	0	0.0
Bisexual	6	3.3	5	6.4	1	1.0
Education						
Less than HS/GED	48	26.7	16	20.5	32	31.4
High school/GED	58	32.2	31	39.7	27	26.5
Some college	59	32.8	21	26.9	38	37.3
4 years college or more	14	7.8	10	12.8	4	3.9
Employment						
Employed	83	46.1	39	50.0	44	43.1
Unemployed	88	48.9	33	42.3	55	53.9
Other†	5	2.8	4	5.1	1	1.0
Used condom last sex	60	33.3	32	41.0	28	27.5
Anonymous sex‡	26	14.4	17	21.8	9	8.8
Incarcerated‡	11	6.1	9	11.5	2	2.0
Marijuana use‡	44	24.4	20	25.6	24	23.5
Number of sex partners§						
0 partners	4	2.2	3	3.8	1	1.0
1 partner	95	52.8	31	39.7	64	62.7
2 partners	52	28.9	21	26.9	31	30.4
3+ partners	25	13.9	21	26.9	4	3.9
Totals	180		78		102	

* Unknown/missing categories not shown

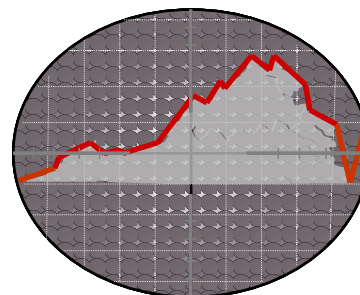
‡ In the previous 12 months

† Includes retired, homemaker, and unable to work

§ In the previous 3 months

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